

# TPC Mass Cross-Check & Attempt to Organize TPC Electronics

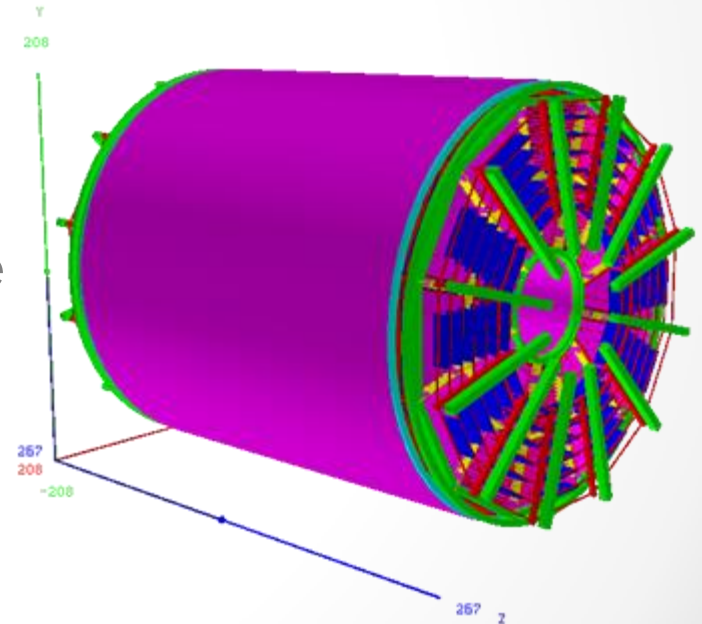
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For iTPC Upgrade Meeting  
November 27, 2014

# TPC Mass Cross-Check

- Masses of the TPC and its components from the note [[SN 0373](#)] and the GEANT/ROOT geometry were compared
- The detailed breakdown of the TPC, including masses, pictures, dimensions, etc., produced in a [webpage](#) format
- Some conclusions presented on the following slides

# TPC

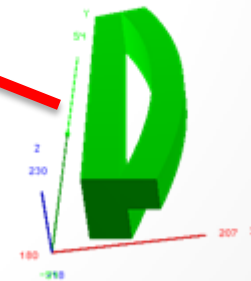
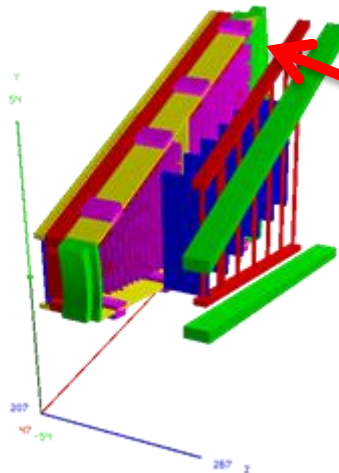
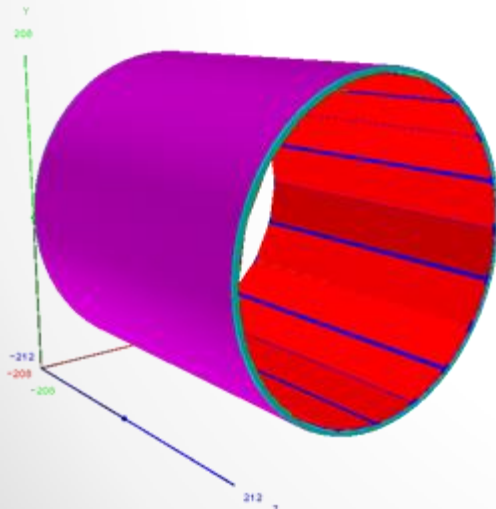
- Total Mass of the TPC from the note and the geometry math within error;
- $6691 : 6778 \pm 63$
- Masses are in [kg] everywhere



# TPC Outer Field Cage

- Mass of the OFC in the Note and the software geometry differ  
 $2263 : 1443 \pm 13$
- This is due to the outer ring being excluded from the OFC in the software geometry;
- The total OFC mass including the outer ring:

$$M'_{OFC} = M_{OFC} + 24M_{TWRI} = 2235 \pm 16$$

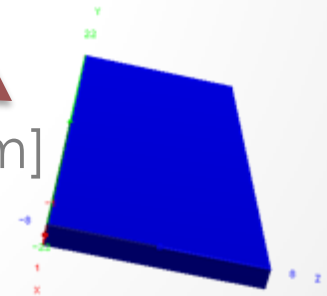
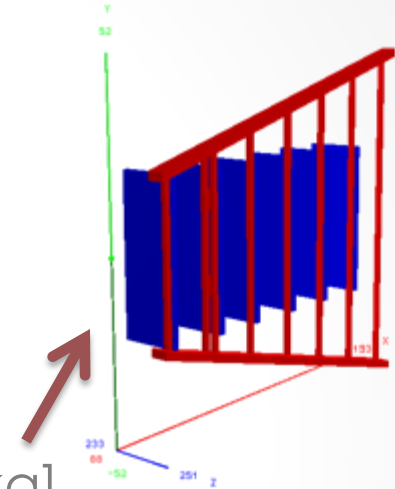


# TPC RDO

- RDO Mass Information from the Note

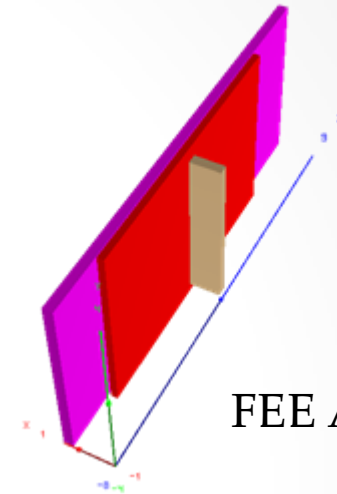
Item	Mass [kg]
RDO	23.133
RDO Manifold	6.8
RDO Cable	17.69

- Total Mass from the Geometry :  $22.67 \pm 0.2$  [kg]
- Mass of the RDO Card Only : 2.28 [kg]
- Mass provided by Alexei : 0.945 [kg]
- Dimensions of the FEE Card in the Geometry and provided by Alexei match [about 45x17x0.3 cm]

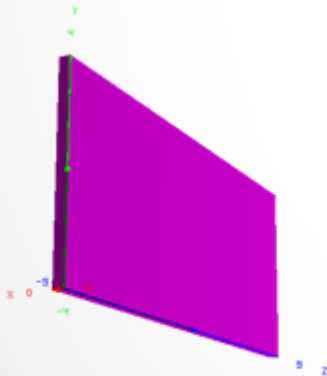


# TPC FEE

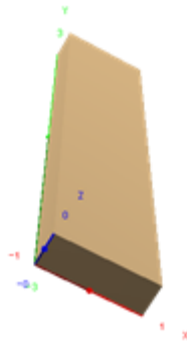
- Total Mass from the Geometry : 0.169 [kg]
- Mass of the FEE Card Only : 0.091 [kg]
- Mass of the FEE Rib : 0.009 [kg]
- Mass of the FEE Place : 0.067
- Mass provided by Alexei : 0.144 [kg]



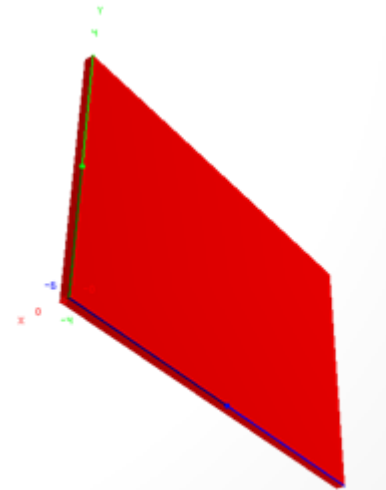
FEE Assembly



FEE Plate



FEE Rib



FEE Card

# Organizing Auxiliary Electronics

- I started putting together some info about the iTPC termination cards

[HERE](#)

- Please throw at me any electronics cards information you want to see added here
- I will maintain and improve this page as more information flows in



- Both webpages are currently in my local web area
- If there is a dedicated place you want me to put this information or just links please let me know